THE COOSA RIVER.

BY

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In the early days of the Republic, before the invention of railroads, public attention was directed to the waterways of this country, both internal and along the sea-coast lines, as means of communication and ways for commerce between the widely separated territories composing the United States.

It was then, in the twenties, that surveys were made for an interior water route along the coasts of the Atlantic Ocean and the Gulf of Mexico, including one for a canal across the peninsula of Florida, as a part of that proposed system. It was then that the Coosa River occupied a prominent place in all water-way schemes, and was a well-known feature of American geography.

Prior to 1823, the Legislature of Alabama passed a bill to improve the navigation of the Coosa River and to aid in its connection with the Tennessee waters. In 1824, this act was formally approved by Congress. In 1828, Congress provided that any surplus of the grant for improving the Tennessee River should be applied to the improvement of the Coosa, Cahawba and Black Warrior Rivers.

The original project for the improvement of the Coosa River contemplated the opening of a continuous water route of transportation from the Mississippi River to the Atlantic Ocean, by way of the Ohio, Tennessee, Coosa, Etowah, Ocmulgee and Altamaha Rivers, with canals from the Tennessee to the Coosa, and from the Etowah to the Ocmulgee. This was designated as the Southern route.—(*Memorial Coosa River Imp. Com., Sept. 27, 1899, p. 5.*)

In proportion as railways developed into large systems, binding together the distant parts of the country by roads capable of rapid transportation, these water-way projects dropped out of mind, and the Coosa River seems to have been so far forgotten that recently in the State of Massachusetts a Superintendent of Education, upon being requested by the Congressman of his district to introduce into the papers for a competitive examination for an appointment to the U. S. Military Academy at West Point questions relating to the Coosa River, replied by asking the Congressman, "Where is the Coosa River?" Judging from what we saw on a recent trip down the river from Rome, Georgia, to Lock No. 4, 35 to 40 miles below Greensport, the river has been forgotten in Alabama and Georgia as well as in Massachusetts.

It is unfortunate for both the Alabama and the Coosa Rivers that

they ever had distinctive names. They are in fact one and the same river, and it is impossible to see any physical demarcation at the point where the change of name occurs. Had the name Alabama been given to the joint rivers, throughout their continuous length, there would have been one noble water-way of 863 miles, from Tennessee to Mobile, at its mouth, which now is apparently broken up into three disjointed pieces, known as the Oostanaula for 108 miles above Rome to the southern edge of the State of Tennessee; as the Coosa River for 315 miles, from Rome, in Georgia, to Wetumpka, in Alabama; as the Alabama River from Wetumpka to the mouth of the Tombigbee River, 390 miles, and as the Mobile River from the latter point, 50 miles to the Bay of Mobile.—(*Mem., Sept. 27, 1899, p. 4.*)

There is but one serious obstacle to the unity of this great river, namely, a series of rapids about midway of its length, stretching over about 142 miles, along which the river falls about 400 feet, or three times as much as the fall of the Niagara River. It is this obstruction which it is proposed to overcome by 36 locks, 3 of which have been completed at the upper end, and one nearly completed at the lower end, whilst a fourth at the upper end was begun several years ago, but work upon it stopped for want of appropriations by Congress, and is now a picture of ruin and decay, and a striking object-lesson of the folly of spasmodic appropriations as a means for executing a great plan of internal improvements. Let us hope that the recent visit of the Rivers and Harbors Committee of the House of Representatives to the locks will result in wiser and more scientific methods.

Whilst it is true that all four rivers—the Mobile, Alabama, Coosa and Oostanaula—form one, yet each has its own distinctive territory, different from the others, and my duty is more particularly to set forth those of the part known distinctively as the Coosa River.

The Coosa Valley, in Alabama, is nearly 10,000 square miles in area, of which about one-half is of coal measures.—(*Geol. Surv. Ala., 1897. Report on Valley Reg., Part 2, The Coosa Valley, p. 1.*)

MINERAL RESOURCES.—

The mineral resources of this region are great and varied. It, with the metamorphic belt to the southeast, might, with a good deal of propriety, be called *the mineral repository of the State.* It includes in very large quantities, and of good quality, some of the most important of all mineral substances. The importance and value of any mineral substance is strictly dependent on its quality, quantity and accessibility. The chief or most valuable mineral substances are stone coal, iron ore, aluminum minerals, barite, manganese, lead ore, gold, marble, building stones, paving stones, curbing stones, slates, millstones, grindstones, whetstones, lithographic stones, road and ballast materials, hydraulic cement rocks, mineral paint, tripoli or polishing powder, sands, mineral waters, etc.—(*Ib., p. 59.*)

Mica, which the development of electrical machinery has raised to the highest importance, ought to be added to this list of the mineral riches of the Coosa Valley.—(*Geological Survey, Ala., Bull. No. 3, Lower Gold Belt, pp. 17, 23, 27, and Bull. No. 5, Upper Gold Belt, pp. 118, 119.*)

AGRICULTURAL RESOURCES.—

The soils of the Coosa Valley region are of three general classes. 1st, calcareous sandy red loams; 2d, slightly calcareous gray sandy soils; 3d, highly calcareous clayey soils.

Of these, the first, calcareous sandy red loams, cover 2,000 square miles; the second, slightly calcareous gray sandy soils, which are based on or overlie sandstones, sandy shales and chert, cover over 7,000 square miles; the third, highly calcareous clayey soils, cover nearly 1,000 square miles. (*Geol. Surv. Ala., 1897; Coosa Valley Region, p. 105*).

AGRICULTURAL FEATURES AND TIMBER.—

The agricultural capabilities of this region are very great, notwithstanding that over 1,000 square miles of its area are in broken mountains, ridges and hills, and over 7,000 square miles of its area are of naturally very poor sandy and siliceous soils. The principal crops of this region, as a whole, are Indian corn, cotton, oats, sorghum, millet, wheat, field peas, sweet potatoes, etc., with some clover and grasses. . . . The soils and climate, however, are suitable for a much greater diversity of crops. The winters are so slow of approach that frequently the crops are not all gathered until about Christmas.

The timber is still in many places in large forests of soft and hard woods. Lumbering is therefore now, and will be for many years, one of the greatest industries of this region. According to Dr. Chas. Mohr, the highest authority in the State, the native arborescent growth comprises over 125 species, and the grasses that grow without cultivation over 150 species, and the plants of more or less nutritious value that are relished by stock and that are suitable for forage and heavy crops are over 50 in number.—(*Geol. Surv. Ala., 1897; Coosa Valley Reg., p. 107.*)

(1) *Agricultural features and timber of the calcareous sandy red loams.* These are pre-eminently the farming lands of this region. They are not only naturally fertile and rich in all plant food, but they are also susceptible of the greatest improvement and are most retentive of all manures placed on them. They, as a general thing, lie well and do not wash badly. They, therefore, if properly cared for, ought not to wear out, but ought to improve with age or cultivation. Their timber is large and well shaped, but there is very little of it left, as nearly all of their lands have been in cultivation for a great many years.

(2) *Agricultural features and timber of the slightly calcareous gray sandy soils.* These soils, though, as a general thing, naturally poor, being deficient in organic matter and lime, are fine horticultural, fruit and grape-growing soils. They grow especially well almost all kinds of root crops, and they make fine natural pastures. They are well drained and often so lie as to be susceptible of great improvement. By the frequent light applications of suitable composts, they, in many localities, become very desirable farming lands. They are still covered for the most part by their native growths.—(*Ib. 108, 109, 110, 111*).

THE CLIMATE.—

This region lies between latitudes 32 deg. 55 min., and 34 deg. 50 min. Its climate is mild and equable. It never experiences the extremes of heat and cold of some of the more northern States. It is never too hot during the summer, nor too cold during the winter, to stop out-door work. The summers, though long, rarely ever reach a temperature of 100 deg. F., the mean summer temperature being about 75 deg. F. . . . . The winters are short and comparatively mild, the streams of running water never freezing over and ice seldom forming over one inch in thickness, and the snow rarely falling to a depth of over a few inches, rapidly melting. The mean winter temperature is about 42 deg. F.—(*Ib.*, *113*.)

WATER-POWER.—

The water-power of the lasting streams of this region is great. There are few of the streams that would not give 8 to 10 feet head of water every few miles, to say nothing of the shoals and water-falls of considerable height that occur along many of them. These streams, with their abundance of water and rocky bottoms and sides, present, at many of the shoals and waterfalls, splendid sites for the erection of machinery of vast magnitude.

The shoals and waterfalls are perhaps the most numerous and greatest along the streams as they pass over the hard strata of the coal measures and Talladega slates, though they are made by the hard strata of all the formations. . . . . The Coosa and Warrior Rivers, alone, if bridled as they leave this region, would doubtless give enough electric power to easily run all the machinery of the State.—(*Ib.*, *112*, *113*.)

RAIN FALL.—

This region is highly favored with abundance of rain and freedom from drouths. Rainy spells and drouths are seldom of long enough duration to seriously affect the agricultural interests. The mean winter rainfall, with melted snow, is about 15 inches, and the mean summer rainfall is about 12 inches.

Lasting springs and wells and streams are common in nearly all parts of the region. It is, therefore, with few exceptions, blessed with an abundance of good water the year round for man and beast.

DRAINAGE.—

The drainage of this region, except in a comparatively few places, is good outside of the *flat woods*. The streams, as a rule, have rapid currents . . . . Much the greater part of their courses are from northeast to southwest, the drainage being almost wholly toward the southwest.—(*Ib.*, *114*.)

THE FLAT WOODS.—

The Coosa River, from Rome southwest to . . . . Gadsden, swings back and forth across the broad level valley that has been cut in the soft calcareous shales and limestones of the Cambrian. The actual flood plain is not extensive and the highly contorted shales are generally exposed along the banks of the river. The country back from the alluvial flood plain is poorly drained and heavily timbered, and to this the term "*flat woods*" is applied.—(*Geol. Surv. Ala.*, *1892*, *Bulletin No. 4*, *N. E. Ala.*, *p. 20*.)

COAL MEASURES.—

The coal measures of the Coosa coal field are found in the Counties of St. Clair and Shelby.

The coal field in Shelby County covers an area of 110 square miles; the thickness of the measures is 2,000 feet.

The coal field in St. Clair County covers an area of 145 square miles, also with a thickness of 2,000 feet.

There are three workable seams, ranging in thickness from three to four feet. The coal appears to be well suited for coking purposes. A seam of coal, reported three feet in thickness, was struck in the Coosa River in blowing out the channel to Lock No. 2 in the S. E. corner of Section 24, T. 14 N., R. 5 E.—(*Geol. Surv. Ala., Coal Measures of the Plateau Region, pp. 220, 221.*)

The extent of this Coosa coal field is entirely through St. Clair County, a distance of 34 miles, and 24 miles into Shelby County, or an aggregate length in all of 60 miles.

Its breadth is very irregular. Gibson considers that 345 square miles is a close approximation to its productive area.—(*Geol. Surv. Ala., 1895, Coosa coal field, p. 9.*)

This coal field is very narrow in proportion to its length, averaging less than six miles wide, and bordered on both sides by valleys of elevation, with high marginal rims or bordering mountains; it is hence, necessarily, a mountainous and rugged area.—(*Ib., p. 10.*)

The conclusion of the report last cited is instructive in showing that very much yet remains to be discovered as to the actual extent of the Coosa coal measures, and gives ground for the belief that the Coosa region in that respect is of far greater importance than we now dare dream.

The report says:

In the examination of this field, its general structure has been satisfactorily ascertained; and a great increase has been made in our knowledge of its coal seams, and of its coal-producing capacity. Yet much remains to be done to give practical completeness to the investigation. It is an undoubted inference from the structure that many coal seams are yet undiscovered, and many that are known are wholly undeveloped. In some of the basins the underground structure is so completely hidden that only deep boring can reveal their contents.

There are several features of similarity that distinguish these coals, as a class, from other coals. They are highly bituminous, free burning, yet rich in fixed carbon. Soft, easy to mine, free from bone or slaty structure, and also from combined sulphur or *pyrites*, generally called sulphur flakes, and often and fervently maledicted by the miners in other fields.

They long sustain combustion and leave but little ash or cinder and no clinker, and are hence well adapted for raising steam, for forge work, and for all other purposes of fuel.

The most important characteristic of these coals is in their *superior coking qualities.* They will rank among the first-class coking coals.—(*Geol. Surv. Ala., 1895, Coosa coal field, pp. 135, 136, 137.*)

A good authority estimates the trade of the Coosa River now navigable, between Rome, in Georgia, and Lincoln or Lock 4, in Alabama, at $2,000,000 per annum, and the commerce to and from the cities in the valley of the Coosa at more than $20,000,000 per annum, and this without any water outlet. (Major C. F. A. Flag-

ler, U.S.A., cited in Memorial of Coosa River Improvement Convention, Sept. 27, 1899.)

Give this valley and these cities a water outlet by surmounting the obstructions to navigation created by the rapids, and who can set bounds to the estimates of the increase of this commerce?

Not many years ago steamboats plied between Wetumpka, in Alabama, at the foot of the rapids of the Coosa, and Mobile and New Orleans. Complete the system of locks, and steamboats will start from Rome, Georgia, 863 miles above Mobile, for Mobile and New Orleans.